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In re Patent Application of:
PIERSON ET AL.

Kathy L. Tissue
(TYPED OR PRINTED NAME OF PERSON MAILING PAPER OR FEE)

Serial No. **Not Yet Assigned**

Kathy L. Tissue
(SIGNATURE OF PERSON MAILING PAPER OR FEE)

Filing Date: **Herewith**

Examiner: **D. Ometz**

For: **TRADING CARD OPTICAL COMPACT
DISC AND METHODS OF USING AND
FORMING SAME**

Art Unit: **2652**

Attorney Docket No.:
18554F

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to the calculation of fees and examination of
the present application, please enter the amendments and
remarks set out below.

In the Title:

Please replace the Title with the following
rewritten Title:

--Methods of Forming a Compact Disc--

In re Patent Application of
PIERSON ET AL.
Serial No. **Not Yet Assigned**
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In the Abstract of the Disclosure:

Please replace the Abstract of The Disclosure on page 27 with the following rewritten Abstract of The Disclosure:

--Methods of forming a compact disc are provided which are compatible with a disc reader having a centrally located spindle and a seating ring for supporting and rotating a compact disc positioned thereon. The optical compact disc according to an embodiment of the invention preferably has at least a first plastic layer having a pattern of digital data encoded thereon. A second metallic layer is formed on at least portions of the first plastic layer, and a third protective layer is formed on at least the second layer for protecting the metallic layer. An indicia bearing fourth layer is formed on the third layer and has a generally planar upper surface for displaying indicia therefrom. An opening extends through the first, second, third, and fourth layers in a medial portion thereof. A trading card interface seat is preferably integrally formed in at least the first layer for seating the trading card onto a loading tray of a disc reader so as to interface with only portions of the seating ring of the disc reader and to read digital data stored thereon from the trading card optical compact disc.--

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In the Specification:

Please replace the paragraph beginning on page 7 at line 11 with the following rewritten paragraph:

--FIG. 4 is a vertical sectional view of a trading card optical compact disc taken along line 4-4 of FIG. 2A according to a first embodiment of the present invention;--

Please replace the paragraph beginning on page 7 at line 14 with the following rewritten paragraph:

--FIG. 5 is a vertical sectional view of a trading card optical compact disc taken along line 5-5 of FIG. 2B according to a second embodiment of the present invention;--

Please replace the paragraph beginning on page 7 at line 21 with the following rewritten paragraph:

--FIG. 8 is a vertical sectional view of a trading card optical compact disc taken along line 8-8 of FIG. 7 according to the third embodiment of the present invention;--

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Please replace the paragraph beginning on page 9 at line 14 with the following rewritten paragraph:

--Preferably, as illustrated in FIGS. 2A-2B, 3-5 and 8, a second metallic layer **24** is formed on at least portions of the first plastic layer **21**, e.g., portions of or the entire major elevational portion **22** of the first plastic layer (see FIGS. 2A and 4). The metallic layer **24** preferably includes an aluminum material such as conventionally used with forming optical compact discs, silver material, gold material, or other reflective metal material. The second layer **24** preferably provides a reflective surface for the light beam after it passes through the first optically transparent plastic layer **21** when attempting to read the digitally encoded data from the disc **20**. As illustrated in FIGS. 2B and 5, for ease of manufacturing and aesthetic purposes, a second embodiment of the trading card **20'** illustrates that the second layer **24'** can also extend substantially the full length and width of the trading card optical compact disc **20'**. The second embodiment also includes a first layer **21'**, a major elevational portion **22'**, In either the first or second embodiments of the trading card optical compact disc **20, 20'**, however, a non-metallic zone is preferably formed around the entire peripheries of the trading card optical compact disc **20, 20'**.--

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Please replace the paragraph beginning on page 9 at line 29 with the following rewritten paragraph:

--Additionally, a third protective layer **26** is preferably formed on at least the second layer **24** for protecting the metallic layer **24** such as from chipping, flaking, or other damage. The third layer **26** is preferably a lacquer material or other thin hard coat material which is formed on the first and second layers **21, 24** to enhance the scratch resistance and provide other protection for these layers **21, 24**. A fourth indicia bearing layer **28** is preferably formed on the third layer **26** and has a generally planar upper surface for displaying indicia **29** therefrom (see also indicia **29**" of FIG. 6). The indicia **29** is preferably a photograph, sketch, textual information, or other images formed by ink or other material formed or positioned onto either the lacquer layer or formed by another material, e.g., paper or plastic, formed on or adhered to the lacquer layer **26**. Also, for example, if the indicia bearing layer is a paper material adhered to the lacquer layer **26**, then an adhesive is preferably positioned therebetween. The thickness of the combination of the first, second, third, and fourth layers **21, 24, 26, 28** of the first and second embodiments is preferably less than about 0.06 inches or 1.5mm.--

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Please replace the paragraph beginning on page 10 at line 14 with the following rewritten paragraph:

--As best shown in FIGS. 6-8, the thickness of the combination of the first, second, third, and fourth layers **21"**, **24"**, **26"**, **28"** of the third embodiment of a trading card optical compact disc **20"**, e.g., a DVD format, which preferably uses a digital video data format is also preferably less than about 0.06 inches or 1.5 mm. This embodiment, as understood by those skilled in the art, preferably has at least two plastic layers **21a"**, **21b"** each which are less than 0.03 inches or 0.75 inches or which form a composite layer and defines a major elevational portion **22"** as illustrated in the other embodiments. These two plastic layers **21a"**, **21b"**, however, are also preferably positioned prior to the metallic layer or second layer **24"**. These plastic layers **21a"**, **21b"** are preferably used for data encoding, focusing, and image enhancement, especially in the DVD format as understood by those skilled in the art, have smaller pits, and form two levels of digitally encoded data.--

Please replace the paragraph beginning on page 11 at line 26 with the following rewritten paragraph:

--The major elevational portion **22** is formed in a medial portion of the trading card **20** and has first and second pairs of spaced-apart outer side peripheries defining outre boundaries of the major elevational portion **22**. Each of the first pair of spaced-apart outer side peripheries arcuately

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extend between each of the second pair of spaced-apart outer side peripheries. Each of the second pair of spaced-apart outer side peripheries extend generally linearly between each of the first pair of spaced-apart outer peripheries **38** (see also **38'** of FIG. 2B and **38"** of FIG. 7). Each of the arcuately-extending first pair of spaced-apart outer side peripheries of the major elevational portion **22** are centered about an axis **A** extending through the medial opening **32** and generally perpendicular to the linearly-extending second pair of spaced-apart outer side peripheries. A radius extending from a medial portion of the medial opening **32** to each of the arcuately-extending first pair of spaced-apart outer side peripheries of the major elevational portion **22** is less than 1.6 inches.--

Please replace the paragraph beginning on page 12 at line 9 with the following rewritten paragraph:

As perhaps best illustrated in FIG. 2A, the encoded digital data of the major elevational portion **22** of the first layer **21** is formed within a circular data zone **34** (see also **34'** of FIGS. 2B and 5 and **34"** of FIG. 7) and preferably does not cover, i.e., is less than, the entire surface area of the major elevational portion **22** of the first layer **21**. The circular data zone **34** has a first inner circular periphery having a radius of at least 0.6 inches and a second outer circular periphery having a radius of less than 1.25 inches. The circular data zone **34** is preferably capable of storing between 60-70 Megabytes of digital information or digital data

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therein in some formats, e.g., audio or CD-ROM and capable of storing between 450-500 Megabytes of digital information in other formats, e.g., DVD. A first non-metallic zone **36** (see also **36'** of FIGS. 2B and 5 and **36"** of FIG. 7) surrounds and extends outwardly a predetermined distance from the medial opening **32**. A second non-metallic zone **38** extends inwardly from the rectangular outer perimeter of the trading card optical compact disc **20** a predetermined distance. The first non-metallic zone **36** preferably includes a stacking ring **37** (see also **37'** of FIGS. 2B and 5 and **37"** of FIG. 7) surrounding the opening **32** for stacking another optical compact disc thereon such as used during mass production. It will be understood by those skilled in the art, however, that the stacking ring **37** is not necessary in the construction of the trading card optical compact disc **20** according to the present invention.--

In the Claims:

Please cancel Claims 1-34.

Please add new Claims 35-43 as follows:

35. A method of forming an optical compact disc, the method comprising the step of molding at least one plastic layer having a pattern of digital data encoded thereon, the at least one plastic layer having a major elevational portion and a minor elevational portion, the major elevational portion

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having the encoded digital data thereon and the minor elevational portion being devoid of the encoded digital data.

36. A method as defined in Claim 35, wherein the major elevational portion is formed in a medial portion of the optical compact disc and has first and second pairs of spaced-apart outer side peripheries defining outer boundaries of the major elevational portion, each of the first pair of spaced-apart outer side peripheries arcuately extending between each of the second pair of spaced-apart outer side peripheries, and each of the second pair of spaced-apart outer side peripheries extending substantially linearly between each of the first pair of spaced-apart outer peripheries.

37. A method as defined in Claim 36, wherein the encoded digital data of the major portions of the plastic layer is formed within a circular data zone and comprises less than the entire surface area of the major elevational portion of the plastic layer.

38. A method as defined in Claim 37, wherein the step of molding the plastic layer includes molding an opening extending through a medial portion of the plastic layer.

39. A method as defined in Claim 38, further comprising the step of applying a metallic layer on at least portions of the plastic layer.

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40. A method as defined in Claim 39, further comprising the step of applying a third protective layer on at least the metallic layer for protecting the metallic layer.

41. A method as defined in Claim 40, further comprising the step of applying an indicia bearing layer on the third layer and having a generally planar upper surface for displaying indicia therefrom.

42. A method of forming an optical compact disc, the method comprising the step of:

molding a compact disc having a pattern of digital data encoded thereon, the compact disc having first and second pairs of spaced-apart outer side peripheries defining outer boundaries of at least portions of the disc, each of the first pair of spaced-apart outer side peripheries arcuately extending between each of the second pair of spaced-apart outer side peripheries extending substantially linearly between each of the first pair of spaced-apart outer peripheries.

43. A method as defined in Claim 42, further comprising positioning an opening in a medial portion of the compact disc, wherein each of the arcuately-extending first pair of spaced-apart outer side peripheries of the portion of the disc are centered about an axis extending through the medial opening and substantially perpendicular to the linearly-extending second pair of spaced-apart outer side peripheries, and wherein a radius extending from a medial

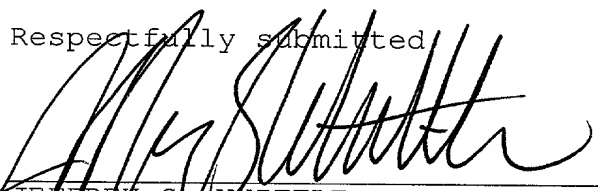
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portion of the medial opening to each of the arcuately-
extending first pair of spaced-apart outer side peripheries of
the major elevational portion is less than 1.6 inches.

REMARKS

It is believed that all of the claims are patentable
over the prior art. Accordingly, after the Examiner completes
a thorough examination and finds the claims patentable, a
Notice of Allowance is respectfully requested in due course.
Should the Examiner determine any minor informalities that
need to be addressed, he is encouraged to contact the
undersigned attorney at the telephone number below.

Respectfully submitted


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Title:

The Title has been amended as follows:

[Trading Card Optical Compact Disc and Methods of
Using and Forming Same] Methods of Forming a Compact Disc

In the Abstract of the Disclosure:

The Abstract of The Disclosure on page 27 has been
amended as follows:

[A trading card optical compact disc and method]
Methods of [using and] forming [the] a compact disc are
provided which are compatible with a disc reader having a
centrally located spindle and a seating ring for supporting
and rotating a compact disc positioned thereon. The [trading
card] optical compact disc according to an embodiment of the
invention preferably has at least a first plastic
[rectangular] layer [having a width of about 2.5 inches and a
length of about 3.5 inches and] having a pattern of digital
data encoded thereon. A second metallic layer [if] is formed
on at least portions of the first plastic layer, and a third
protective layer is formed on at least the second layer for
protecting the metallic layer. An indicia bearing fourth
layer is formed on the third layer and has a generally planar
upper surface for displaying indicia therefrom. An opening

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extends through the first, second, third, and fourth layers in a medial portion thereof. A trading card interface seat is preferably integrally formed in at least the first layer for seating the trading card onto a loading tray of a disc reader so as to interface with only portions of the seating ring [and not other portions of the seating ring] of the disc reader and to read digital data stored thereon from the trading card optical compact disc.

In the Specification:

The paragraph beginning on page 7 at line 11 has been amended as follows:

FIG. 4 is a vertical sectional view of a trading card optical compact disc [to taking a long line for] taken along line 4-4 of FIG. 2A according to a first embodiment of the present invention;

The paragraph beginning on page 7 at line 14 has been amended as follows:

FIG. 5 is a vertical sectional view of a trading card optical compact disc [taking a long line] taken along line 5-5 of FIG. 2B according to a second embodiment of the present invention;

The paragraph beginning on page 7 at line 21 has been amended as follows:

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FIG. 8 is a vertical sectional view of a trading card optical compact disc [taking] taken along line 8-8 of FIG. 7 according to the third embodiment of the present invention;

The paragraph beginning on page 9 at line 14 has been amended as follows:

Preferably, as illustrated in FIGS. 2A-2B, 3-5 and 8, a second metallic layer **24** is formed on at least portions of the first plastic layer **21**, e.g., portions of or the entire major elevational portion **22** of the first plastic layer (see FIGS. 2A and 4). The metallic layer **24** preferably includes an aluminum material such as conventionally used with forming optical compact discs, silver material, gold material, or other reflective metal material. The second layer **24** preferably provides a reflective surface for the light beam after it passes through the first optically transparent plastic layer **21** when attempting to read the digitally encoded data from the disc **20**. As illustrated in FIGS. 2B and 5, for ease of manufacturing and aesthetic purposes, a second embodiment of the trading card **20'** illustrates that the second layer **24'** can also extend substantially the full length and width of the trading card optical compact disc **20'**. The second embodiment also includes a first layer **21'**, a major elevational portion **22'**, In either the first or second embodiments of the trading card optical compact disc **20, 20'**, however, a non-metallic zone is preferably formed around the

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entire peripheries of the trading card optical compact disc
20, 20'.

The paragraph beginning on page 9 at line 29 has
been amended as follows:

Additionally, a third protective layer **26** is preferably formed on at least the second layer **24** for protecting the metallic layer **24** such as from chipping, flaking, or other damage. The third layer **26** is preferably a lacquer material or other thin hard coat material which is formed on the first and second layers **21, 24** to enhance the scratch resistance and provide other protection for these layers **21, 24**. A fourth indicia bearing layer **28** is preferably formed on the third layer **26** and has a generally planar upper surface for displaying indicia **29** therefrom (see also indicia 29" of FIG. 6). The indicia **29** is preferably a photograph, sketch, textual information, or other images formed by ink or other material formed or positioned onto either the lacquer layer or formed by another material, e.g., paper or plastic, formed on or adhered to the lacquer layer **26**. Also, for example, if the indicia bearing layer is a paper material adhered to the lacquer layer **26**, then an adhesive is preferably positioned therebetween. The thickness of the combination of the first, second, third, and fourth layers **21, 24, 26, 28** of the first and second embodiments is preferably less than about 0.06 inches or 1.5mm.

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The paragraph beginning on page 10 at line 14 has been amended as follows:

As best shown in FIGS. 6-8, the thickness of the combination of the first, second, third, and fourth layers **21"**, **24"**, **26"**, **28"** of the third embodiment of a trading card optical compact disc **20"**, e.g., a DVD format, which preferably uses a digital video data format is also preferably less than about 0.06 inches or 1.5 mm. This embodiment, as understood by those skilled in the art, preferably has at least two plastic layers **21a"**, **21b"** each which are less than 0.03 inches or 0.75 inches or which form a composite layer and defines a major elevational portion **22"** as illustrated in the other embodiments. These two plastic layers **21a"**, **21b"**, however, are also preferably positioned prior to the metallic layer or second layer **24"**. These plastic layers **21a"**, **21b"** are preferably used for data encoding, focusing, and image enhancement, especially in the DVD format as understood by those skilled in the art, have smaller pits, and form two levels of digitally encoded data.

The paragraph beginning on page 11 at line 26 has been amended as follows:

The major elevational portion **22** is formed in a medial portion of the trading card **20** and has first and second pairs of spaced-apart outer side peripheries defining outre boundaries of the major elevational portion **22**. Each of the

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first pair of [space-apart] spaced-apart outer side peripheries arcuately extend between each of the second pair of [space-apart] spaced-apart outer side peripheries. Each of the second pair of [space-apart] spaced-apart outer side peripheries extend generally linearly between each of the first pair of spaced-apart outer peripheries 38 (see also 38' of FIG. 2B and 38" of FIG. 7). Each of the arcuately-extending first pair of spaced-apart outer side peripheries of the major elevational portion **22** are centered about an axis **A** extending through the medial opening **32** and generally perpendicular to the linearly-extending second pair of spaced-apart outer side peripheries. A radius extending from a medial portion of the medial opening **32** to each of the arcuately-extending first pair of spaced-apart outer side peripheries of the major elevational portion **22** is less than 1.6 inches.

The paragraph beginning on page 12 at line 9 has been amended as follows:

As perhaps best illustrated in FIG. 2A, the encoded digital data of the major elevational portion **22** of the first layer **21** is formed within a circular data zone **34** (see also 34' of FIGS. 2B and 5 and 34" of FIG. 7) and preferably does not cover, i.e., is less than, the entire surface area of the major elevational portion **22** of the first layer **21**. The circular data zone **34** has a first inner circular periphery having a radius of at least 0.6 inches and a second outer circular periphery having a radius of less than 1.25 inches.

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The circular data zone **34** is preferably capable of storing between 60-70 Megabytes of digital information or digital data therein in some formats, e.g., audio or CD-ROM and capable of storing between 450-500 Megabytes of digital information in other formats, e.g., DVD. A first non-metallic zone **36** (see also **36'** of FIGS. 2B and 5 and **36"** of FIG. 7) surrounds and extends outwardly a predetermined distance from the medial opening **32**. A second non-metallic zone **38** extends inwardly from the rectangular outer perimeter of the trading card optical compact disc **20** a predetermined distance. The first non-metallic zone **36** preferably includes a stacking ring **37** (see also **37'** of FIGS. 2B and 5 and **37"** of FIG. 7) surrounding the opening **32** for stacking another optical compact disc thereon such as used during mass production. It will be understood by those skilled in the art, however, that the stacking ring **37** is not necessary in the construction of the trading card optical compact disc **20** according to the present invention.

Please cancel Claims 1-34.

Please add new Claims 35-43 as follows:

35. A method of forming an optical compact disc, the method comprising the step of molding at least one plastic layer having a pattern of digital data encoded thereon, the at least one plastic layer having a major elevational portion and a minor elevational portion, the major elevational portion

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having the encoded digital data thereon and the minor
elevational portion being devoid of the encoded digital data.

36. A method as defined in Claim 35, wherein the
major elevational portion is formed in a medial portion of the
optical compact disc and has first and second pairs of spaced-
apart outer side peripheries defining outer boundaries of the
major elevational portion, each of the first pair of spaced-
apart outer side peripheries arcuately extending between each
of the second pair of spaced-apart outer side peripheries, and
each of the second pair of spaced-apart outer side peripheries
extending substantially linearly between each of the first
pair of spaced-apart outer peripheries.

37. A method as defined in Claim 36, wherein the
encoded digital data of the major portions of the plastic
layer is formed within a circular data zone and comprises less
than the entire surface area of the major elevational portion
of the plastic layer.

38. A method as defined in Claim 37, wherein the
step of molding the plastic layer includes molding an opening
extending through a medial portion of the plastic layer.

39. A method as defined in Claim 38, further
comprising the step of applying a metallic layer on at least
portions of the plastic layer.

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40. A method as defined in Claim 39, further comprising the step of applying a third protective layer on at least the metallic layer for protecting the metallic layer.

41. A method as defined in Claim 40, further comprising the step of applying an indicia bearing layer on the third layer and having a generally planar upper surface for displaying indicia therefrom.

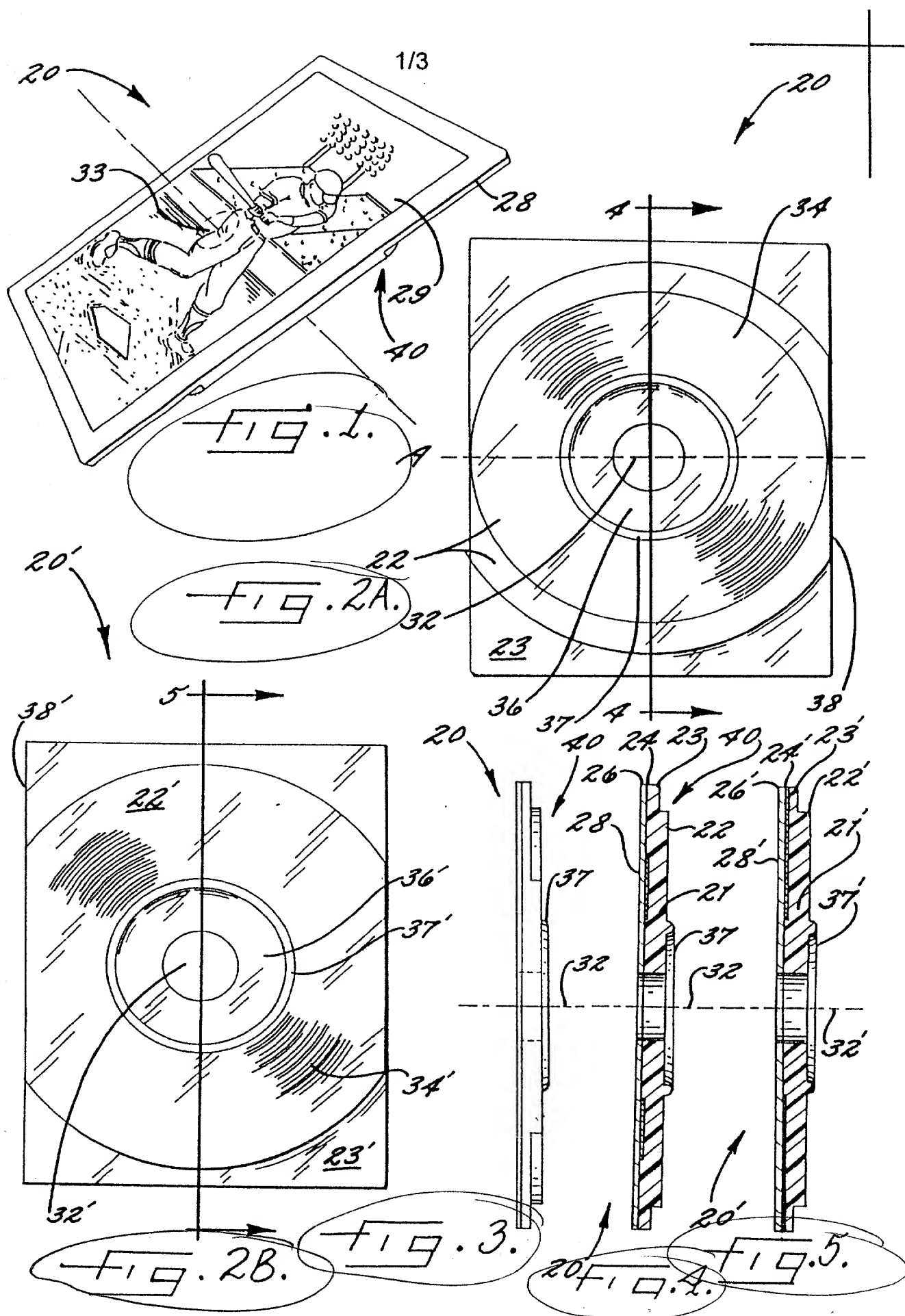
42. A method of forming an optical compact disc, the method comprising the step of:

molding a compact disc having a pattern of digital data encoded thereon, the compact disc having first and second pairs of spaced-apart outer side peripheries defining outer boundaries of at least portions of the disc, each of the first pair of spaced-apart outer side peripheries arcuately extending between each of the second pair of spaced-apart outer side peripheries extending substantially linearly between each of the first pair of spaced-apart outer peripheries.

43. A method as defined in Claim 42, further comprising positioning an opening in a medial portion of the compact disc, wherein each of the arcuately-extending first pair of spaced-apart outer side peripheries of the portion of the disc are centered about an axis extending through the medial opening and substantially perpendicular to the linearly-extending second pair of spaced-apart outer side peripheries, and wherein a radius extending from a medial

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portion of the medial opening to each of the arcuately-
extending first pair of spaced-apart outer side peripheries of
the major elevational portion is less than 1.6 inches.



2/3

20"

29"

FIG. 6.

20"

8

8

38"

32"

36"

37"

34"

22"

23"

FIG. 7.

FIG. 8.

20"

26"

21"

24"

28"

32"

216"

214"

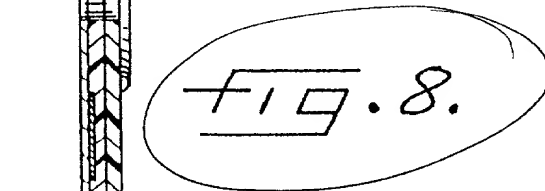
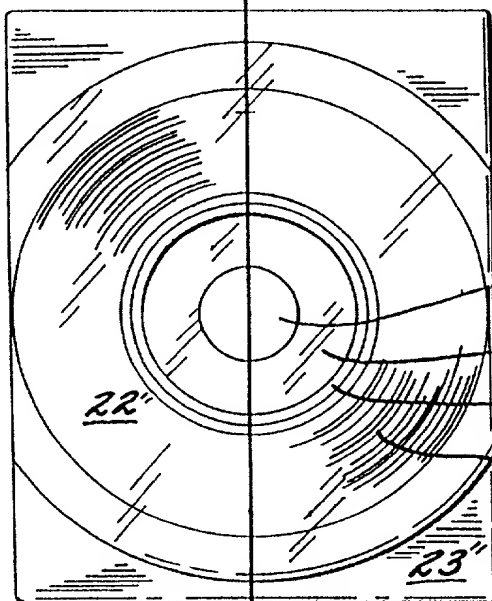
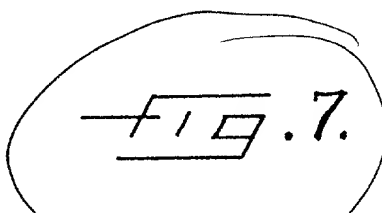
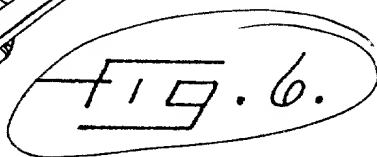
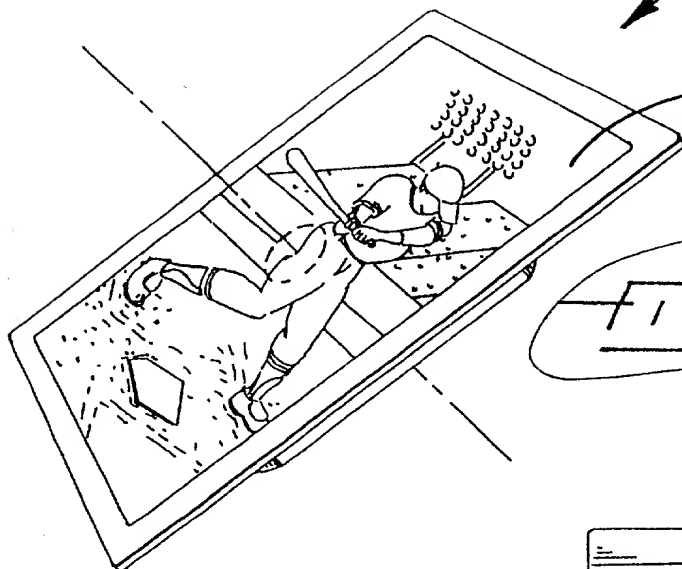


FIG. 9.

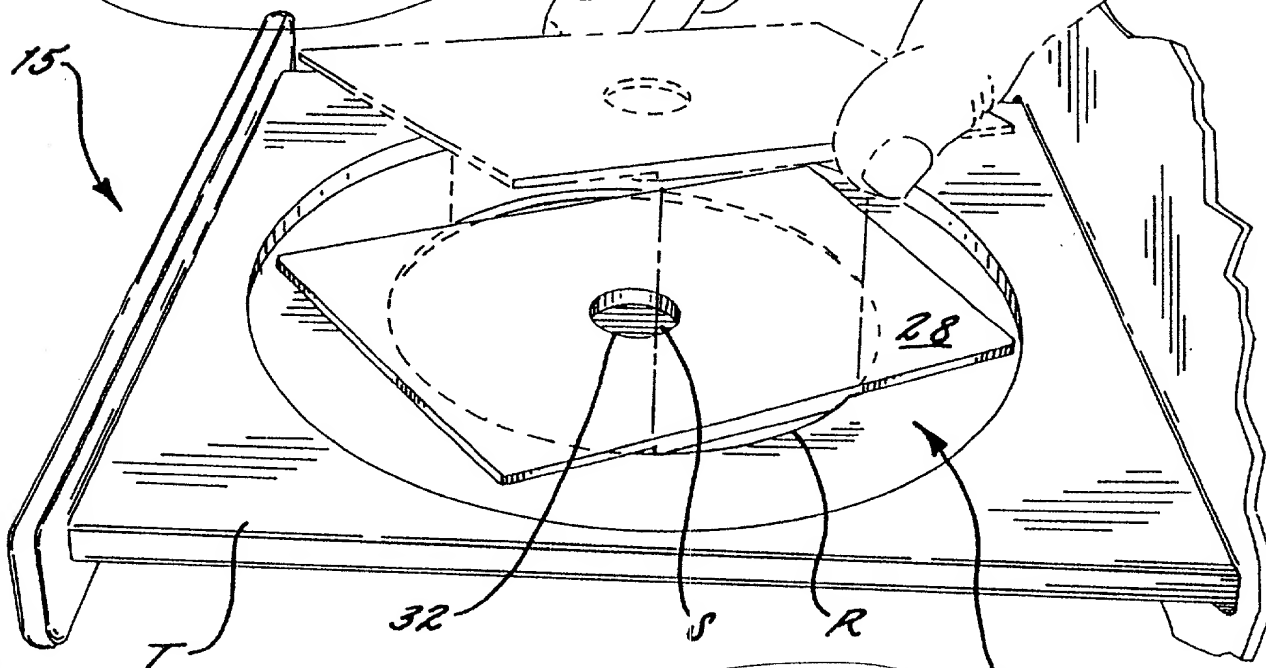


FIG. 10.

